

REMARKS/ARGUMENTS

Claim 1 has been amended for further clarity.

The Applicant notes with appreciation that the Examiner has withdrawn the previous grounds of rejection. In the present Office Action, the Examiner considers claims 1-9 as not being patentable in view of GEISSBUGLER and newly cited MILES (U.S. Patent No. 4,425,980). Reconsideration by the Examiner and withdrawal of the rejection are respectfully requested in light of the comments which follow.

The present invention relates to an acoustical panel having first and second walls with a sound absorber disposed therebetween. On an inside face of the first wall facing towards the sound absorber, a plate of viscoelastic material is provided. Successively arranged after the plate of viscoelastic material is a backing plate carrying spacer elements that create an air gap between the sound absorber and the backing plate. Next is located the sound absorber, and finally the second wall.

As seen from Fig. 1, the first plate, indicated at 1 receives sound excitation, indicated by arrow F. On the inside face of the plate 1 is a plate of viscoelastic material, shown at 17. The backing plate 10 has mechanical spacer elements, such as a grid 5, which assure that there is an air gap between the backing plate 10 and the sound absorber, shown at 3. Thus, the wall 1 that receives the sound excitation is decoupled from the second wall 2.

As indicated in the Official Action, Geissbuhler is relied upon for its disclosure of first and second walls 18 and 20 in Fig. 2a, with a sound absorber 36 disposed therebetween. Spacers 26 connect the first wall 18 to the second wall 20 and also form an air gap 16 between the second wall 20 and the sound absorber 36. The Examiner notes that Geissbuhler does not disclose a plate of viscoelastic material, but relies upon Miles for its disclosure of the use of a viscoelastic plate in a sandwich type vibration absorbing arrangement. The Examiner contends that it would have been obvious to combine the teachings of Miles to use a viscoelastic plate in conjunction with the sound absorption panel of Geissbuhler.

This combination of reference teachings is fundamentally flawed, and fails to establish a *prime facie* case of obviousness. The references as combined do not meet all of the limitations

recited in the claims, and there is nothing in the references themselves that would motivate the person of ordinary skill to have combined the reference teachings as proposed.

Miles describes a plate of viscoelastic material (66, fig. 5 and 6) that is sandwiched between a skin 65 and a flexible constraining layer 68. Another layer 71 of viscoelastic material is sandwiched between said layer 68 and flanges 70 of metallic I-beam 69. In the structure contemplated by Miles, the respective layers are directly connected. Miles explains col. 4, 1. 65 to col. 5, 1. 26 (fig. 3-4) how this multi-layer sandwich operates and it is essentially linked to the presence of the rigid beam 41. Fig. 4 shows how the sandwich cooperates with the lower flange 49 of I-beam 41. This passage shows that for Miles, a sandwich is essential to provide an amount of vibration damping. More particularly, several layers of each item are laid on top of one another to produce a thicker sandwich (col. 4, 1.55-60).

The reasons why Miles employs a layer of viscoelastic material relate to the specific environment shown by Miles, namely for damping between the flange of a beam and an attached skin in an aircraft. Geissbuhler is concerned with a wooden wall structure having opposed walls and an air gap, which is altogether different from the structure of Miles. There is nothing in Miles that would incite or motivate someone to utilize a plate of viscoelastic material in the entirely different environment of the sound damping partition of Geissbuhler where there are spacers that create an air gap.


Furthermore, nothing in Geissbuhler or Miles or in any combination of these teachings would lead to the specific sequence of components as recited in claim 1. As earlier noted, claim 1 calls for the panel to have the following components successively arranged in a specific sequence: (1) a first wall; (2) a plate of viscoelastic material on an inside face of the first wall; (3) a backing plate; (4) spacer elements between the backing plate and the sound absorber that create an air gap between the sound absorber and the backing plate; (5) the sound absorber; and (6) the second wall. From the teachings in Miles, it would not be obvious for the person of ordinary skill in the art to arrive at the specific arrangement as set forth in claim 1.

It is thus believed that the claims are clearly patentable over the newly cited prior art. Favorable reconsideration by the Examiner and allowance of all claims as presented are respectfully solicited.

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Amdt. dated June 10, 2008
Reply to Office Action of March 20, 2008

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefor (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Raymond O. Linker, Jr.', written over a horizontal line.

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